COPY OF ALL CLAIMS

- (currently amended) A process for the polymerization of olefins, which comprises carrying out the polymerization in the presence of catalysts comprising the following components:
 - (A) at least one complex of a transition metal with a tridentate macrocyclic ligand which bears at least one substituent having a donor function and
 - (B) <u>an aluminoxane</u> optionally, one or more activator compounds.
- (previously presented) A process as claimed in claim 1, wherein the component(A) is a compound of the formula I

where the variables have the following meanings:

- M is a transition metal of groups 3 to 12 of the Periodic Table,
- B¹-B³ are each a divalent radical selected from the group consisting of

where

E¹-E⁶ are silicon or carbon and not more than two of E⁴-E⁶ are silicon,

A¹-A³ are nitrogen or phosphorus,

 $\mathsf{R}^1\text{-}\mathsf{R}^{15}$ are hydrogen, $\mathsf{C}_1\text{-}\mathsf{C}_{20}\text{-alkyl}$, 5- to 7-membered cycloalkyl which may in turn bear a $\mathsf{C}_6\text{-}\mathsf{C}_{10}\text{-aryl}$ group as substituent, $\mathsf{C}_2\text{-}\mathsf{C}_{20}\text{-alkenyl}$, $\mathsf{C}_6\text{-}\mathsf{C}_{20}\text{-aryl}$, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and 6-20 carbon atoms in the aryl part, SiR^{32}_3 or a radical of the formula -Z-D, where the organic radicals $\mathsf{R}^1\text{-}\mathsf{R}^{15}$ may be substituted by halogen(s) and any two geminal or vicinal radicals $\mathsf{R}^1\text{-}\mathsf{R}^{15}$ may also be joined to form a five- or six-membered ring, and at least one of the radicals $\mathsf{R}^1\text{-}\mathsf{R}^{15}$ is a radical -Z-D,

where

- D is NR¹⁶R¹⁷, NR¹⁶, OR¹⁶, O, SR¹⁶, S, PR¹⁶R¹⁷, SO₃R¹⁶, OC(O)R¹⁶, CO₂, C(O)R¹⁶, C(NR¹⁶)R¹⁷, CN or a five- or six-membered heterocyclic ring system, where the radicals R¹⁶-R¹⁷ may also be joined to Z to form a five- or six-membered ring;
- Z is a divalent radical selected from the group consisting of:

$$R^{18}$$
 R^{20} R^{22} R^{24} R^{26} R^{28} $-L^{1}$ $-L^{2}$ L^{3} $-L^{4}$ L^{5} L^{6} L^{19} L^{21} L^{23} L^{25} L^{27} L^{29} L^{29} L^{21} L^{23} L^{25} L^{27} L^{29} L^{29} L^{21}

where

L¹-L⁶ are silicon or carbon, not more than two of L⁴-L⁶ are silicon and m=0 if any two of the vicinal radicals R²⁰, R²², R²⁴, R²⁶ and R²⁸ form an aromatic ring or a double bond is formed between two adjacent L²-L⁶, and otherwise m=1,

X are, independently of one another, fluorine, chlorine, bromine, iodine, hydrogen, C_1 - C_{10} -alkyl, C_2 - C_{10} -alkenyl, C_6 - C_{20} -aryl, alkylaryl having 1-10 carbon atoms in the alkyl part and 6-20 carbon atoms in the aryl part, NR³⁰R³¹, OR³⁰, SR³⁰, SO₃R³⁰, OC(O)R³⁰, CN, SCN, =O, b-diketonate, BF₄-, PF₆- or bulky noncoordinating anions,

R¹⁶-R³¹ are hydrogen, C_1 - C_{20} -alkyl, 5- to 7-membered cycloalkyl which may in turn bear a C_6 - C_{10} -aryl group as substituent, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and 6-20 carbon atoms in the aryl part, SiR^{32}_3 , where the organic radicals R^{16} - R^{31} may be substituted by halogen(s) and any two geminal or vicinal radicals R^{16} - R^{31} may also be joined to form a five- or six-membered ring,

 R^{32} are, independently of one another, hydrogen, C_1 - C_{20} -alkyl, 5- to 7-membered cycloalkyl which may in turn bear a C_6 - C_{10} -aryl group as

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substituent, C_2 - C_{20} -alkenyl, C_6 - C_{20} -aryl, alkylaryl having from 1 to 10 carbon atoms in the alkyl part and 6-20 carbon atoms in the aryl part and any two geminal radicals R^{32} may also be joined to form a five- or six-membered ring,

- is a number from 1 to 4 which corresponds to the oxidation state of M or, if D is covalently bound to the metal center M, the oxidation state of M minus the number of groups D covalently bound to M, and, furthermore, the value of n is reduced by 1 for each X=oxygen.
- 3. (original) A process as claimed in claim 2, wherein only R¹ is a radical -Z-D.
- 4. (previously presented) A process as claimed in claim 2, wherein B¹, B² and B³ are identical.
- 5. (previously presented) A process as claimed in claim 2, wherein D is oxygen, NR¹⁶. NR¹⁶R¹⁷ or CN.
- 6. (previously presented) A process as claimed in claim 1, wherein the transition metal M comes from groups 3 to 8 of the Periodic Table.
- 7. (previously presented) A process as claimed in claim 1, wherein the transition metal M comes from group 6 of the Periodic Table.
- 8. (canceled)
- (previously presented) A process as claimed in claim 1, wherein at least one olefin selected from the group consisting of ethene, propene, 1-butene,
 1-pentene, 1-hexene, 1-heptene or 1-octene is polymerized.

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- 10. (previously presented) A process as claimed in claim 1, wherein the polymerization is carried out in suspension or in the gas phase.
- 11. (previously presented) A process as claimed in claim 1, wherein at least one metal complex (A) in the presence of at least one catalyst (C) customary for the polymerization of olefins and <u>an aluminoxane</u>, optionally, one or more activator compounds (B) is used.
- 12. (previously presented) A catalyst system comprising the following components:
 - a) at least one transition metal complex (A) as defined in claim 1 and
 - b) at least one <u>aluminoxane</u> activator compound (B).
- 13. (withdrawn)